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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Sylvain SARDA

Serial No.: 09/455,408

Filed: December 6, 1999

For: METHOD FOR MODELLING FLUID FLOWS IN A
FRACTURED MULTILAYER POROUS MEDIUM AND
CORRELATIVE INTERACTIONS IN A PRODUCTION WELL

Art Unit: 2123

Examiner: Day, H.

SUPPLEMENTAL RESPONSE AND DECLARATION BERNARD BOURBIAUX
PURSUANT TO 37 CFR §1.132

Mail Stop AF
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, VA 22313-1450

January 22, 2004

Sir:

Submitted herewith is the Declaration of Bernard Bourbiaux pursuant to 37 CFR §1.132 which Declaration and Remarks herein are supplemental to the Amendment of December 24, 2003, regarding the rejection of the claims as not being enabled by the specification.

Specifically, with respect to the rejection of claims 7-12 under 35 USC §112 first paragraph as containing subject matter which is not enabled as discussed on page 16 of the Amendment, Mr. Bourbiaux's Declaration sets forth the relevant portions of the specification which are paragraphs [0020] - [0027] and the discussion of United States Patent 6,023,652 which is referred to in the specification of the present application. Mr. Bourbiaux's Declaration emphasizes relevant portions of

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the text of the above-referenced paragraphs which should be specifically considered by the Examiner in addition to the overall text of paragraphs 20-27.

Mr. Bourbiaux's Declaration concludes that the calculation of volume as discussed in paragraph 27 is a simple volumetric calculation of area times height as understood by persons of ordinary skill working in the field of the present invention.

Mr. Bourbiaux's Declaration goes on to describe United States Patent 6,023,656, which is referred to in the specification of the present application, regarding its relevant teachings pertaining to the calculation of volume. Mr. Bourbiaux provides a diagram of fractured meshes, which are consistent with Fig. 2 of United States Patent 6,023,656, on page 5 of his Declaration which explains relevant dimensions which are used to compute the area of a fracture mesh volume.

Mr. Bourbiaux concludes on page 5 that "[I]f h is the thickness of the geological layer containing the considered fracture mesh, and l_1 and l_2 are the respective heights of the two constitutive fracture meshes A1, A2 and B1, B2, and a_1 and a_2 which is the respective apertures, then the fracture volume . . ." which is the equation reproduced at the bottom of page 5 of his Declaration.

It is submitted that based upon Mr. Bourbiaux having an engineering degree and a master degree and further having worked in research relating to modeling of fractured reservoirs and simulation thereof that his Declaration is entitled to status as an expert opinion regarding the efficiency of disclosure regarding calculation of volume. Moreover, as described above, it is submitted his Declaration in fact demonstrates that a person of ordinary skill in the art, without undue experimentation, would be enabled to calculate volume without undue experimentation.

Consideration of the above remarks and Mr. Bourbiaux's Declaration is respectfully requested.

To the extent necessary, Applicants petition for an extension of time under 37 C.F.R. §1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 01-2135 (612.37806X00) and please credit any excess fees to such Deposit Account.

Respectfully submitted,

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